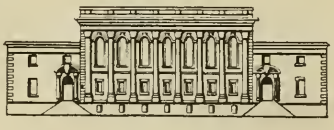

TOWARD GREATER EFFICIENCY
IN
DELIVERY OF HEALTH SERVICES

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Introduction

For Americans it is common knowledge that the cost of medical services is ever-rising. The government has instituted Medicare and Medicaid to help alleviate the burden of medical costs for the aged and the poor, but among the majority of the population there is growing sentiment that "something must be done". Despite rising costs of health services and ever higher financial inputs, it is generally held in professional circles that the level of health in America is not what it could and should be.

This study attempts to survey the current state of the system of health care delivery in the United States in order to identify the unique economic characteristics of the industry that pose special problems for the formulation of public policy. For society as a whole, the over-riding issue in health care delivery is its phenomenal cost. The manner and degree to which consumers, providers and government have all shared in contributing to the increasing costs will be closely examined.

In studying the industry, attention will be given to the origin and nature of the significant distortions of supply and demand for health services that have occured. The system of financing health care expenses can be identified as a principal source of these distortions. Other important factors include consumer ignorance with regard to the appropriate cost of treatment and the relative effectiveness of various forms of treatment. Taking into account the size and importance of the health care sector of the economy, the significance of deficiencies in

the market mechanism becomes important.

There have been several proposals in the past few years to reorganize the health care industry. The aim of these reforms is to improve its financial efficiency, to make it more medically effective and to instill in it managerial responsibility so as to achieve a reasonable cost level. The proposal of the government sector under President Nixon has been legislated as the Health Maintenance Organization Act of 1973. It is based on several successful experiments with comprehensive prepaid group practice in the private sector. The concept of the administration model delivery system, called a health maintenance organization (hereafter - HMO), follows the examples at Kaiser-Permanente and Palo Alto. The HMO-concept offers something new in its structure and administration.

The conclusion of this paper is that a major restructuring of the delivery system, making it more responsive to market signals, would result in more efficient use of scarce medical resources. This study aims to examine three proposals for such changes. These include the example set by the Kaiser-Permanente Medical System, the suggestions of the Committee for Economic Development, and the Health Maintenance Organization Act--passed December 29, 1973.

General Description of Health Today

Since World War II, there has been a growing awareness and concern in the U.S. on the topic of health. Until 1965, the main issue was financing--or how could all people be given the capability of paying

for the health care they needed. In the early 60's there came the realization that simply relieving the burden of payments would not solve all the problems, but could, in fact, create new and sometimes more difficult ones. For instance, it is widely believed that the situation has been worsened because increasing the ability of certain segments of the population to pay for medical care has encouraged an increase in demand beyond the ability of existing resources to meet them. Poor distribution of manpower and facilities on a functional level as well as a geographical one has resulted in underutilization of resources as well as soaring prices.

Medicare and Medicaid (Social Security Act, Titles 18 and 19, 1965) were a climax of the effort to alleviate the financial burden of health care for certain portions of the population. However, these programs appear to be major contributors to the rising costs in the industry. That the passage of these Acts did not provide the solution is evidenced by the fact that there have been even more studies and discussions. The object of this increased activity is directed toward discovering how Americans take care of themselves, and more especially, why, how, and where they need further help. Congress took further action in passing the Community Health Planning Act ("Partnership for Health", 1965). Then the National Center for Health Services Research and Development was created to experiment with and evaluate the economic, sociological, and organizational aspects of the health care industry.[1]

The nation's health services are, of course, provided by various doctors, dentists and ancillary persons and facilities. The size and

diversity of the latter group (related persons and facilities) contribute to the difficulties encountered in attempting to re-organize the health services industry. Bowen and Jeffers, in their article "The Economics of Health Services", give us an insight into the nature of the industry when they state that

> "The health services system of the United States is a conglomerate of activities intended to improve health, alleviate suffering, increase comfort, enhance personal and financial security against illness, and aid in family planning. They include rendering hundreds of different personal services and producing and distributing thousands of different products."[2]

To be more specific, we can distinguish eleven general categories[3]:

1) Professional and other services rendered to patients by physicians, dentists, nurses and others, as well as their assistants and facilities. (Excluding services of hospital employees, and health institutions.)

2) Professional and other services rendered to patients by employees and capital in various health care institutions.

3) Services provided either to patients directly, or to practitioners, or to institutions by independent laboratories and auxiliary agencies.

4) Manufacture and distribution of consumable goods such as eyeglasses.

5) Public health activities not already included above, e.g. environmental monitoring, control, and improvement.

6) Operation of health insurance and the other various related financial activities.

7) Formal education and training of health services personnel.

8) Research related to health services, conducted by government, universities, research institutions, private business and others.

9) Patient and family time in obtaining health services and in home care. Time is a major element of health care, for example: time spent waiting in a physician's office is a significant expenditure of human resources that is frequently overlooked in calculating the costs of health services.

10) Activities intended to modify the system--e.g. the AMA--through public opinion and legislative action.

11) Construction of buildings and other fixed capital.

This list of categories is the framework of a great industry: labor and capital are employed to produce and sell products and services to the consuming public. Over the past twenty years, the health services industry has grown until now the U.S. is able to boast some of the best hospitals, physicians, and medical centers in the world. The magnitude of the American health care industry is significant. There are 4.4 million people employed in related professions and some 3.3 million beds in hospitals and other inpatient facilities. Total manpower in the health field accounts for 5 per cent of the labor force--making health care the nation's third largest industry.[4] The American population of 200 million makes heavy use of the various health care facilities.

> "Examinations by physicians are approaching 1 billion annually--an average of 4.6 visits per person per year in 1970. Some 32 million patients a year are admitted to hospitals as bed patients and more than 181 million get hospital care as out-patients. Nearly 900,000 people reside in nursing and related

> homes. At least 1 billion drug prescriptions are filled annually while vast numbers of drugs are purchased over the counter."[5]

An important component in the public's utilization of these services is their attitude toward health care. It is increasingly the accepted public opinion that health care is a right--the idea that all people are entitled to good health care. The late President Johnson once made a remark characterizing this attitude: "Today we expect what yesterday we could not have envisioned--adequate medical care for every citizen."[6] Perhaps it is because one's state of health is so closely related to suffering, birth and death that the public feels so strongly about it. Nevertheless, it is a peculiarity of the industry that the public should have such high universal expectations.

Before beginning a comparison of the attributes of the theoretically ideal system with the imperfections of reality, and before undertaking a study on how best to achieve the ideal, we should recall and keep in mind two conditions. The first is that no matter how perfect our health care industry is, it is not the sole factor determining the nation's health. Of equal importance are income-level, housing, nutrition, hereditary traits, life-style and general safety. The second is the role of health in national priorities. In deciding how much of the "ideal" to implement, the responsible government must take into account other priorities and overall resources.

> "In spite of the attitude of many of our citizens that we are living in an affluent society, recognition must be given to the fact that there are limits to our manpower reservoir as well as our purse. Thus there is created some difference between needs that must be met and wants or desires that may be beyond our

capabilities. It should be noted that President Johnson [in above quote] chose the words 'adequate medical care'. He apparently recognized that there are limitations on our capabilities."[7]

Some of the goals[8] incorporated into policy and supported by public concern are:

1) Access - a reasonable quality and quantity regardless of income, social status or geographical area.

2) Pooling of risks - financing of costs should be spread among the population so that costs are predictable.

3) Personal relationship - services rendered in an atmosphere of concern and caring for the person.

4) Freedom - on the part of practitioners to set up their practices and fee schedules as they wish; on the part of patients to choose both their practitioner and their hospital.

5) Protection against incompetence, quackery and fraud.

6) Economy - It is expected that health services will be provided efficiently: at a reasonable cost with minimal over-utilization and waste.

7) Progressiveness - The system should be innovative and promptly responsive to new knowledge and technology, in the scientific as well as organizational aspects of health care.

The fact that all of these goals are not mutually compatible is an important source of the many contradictions and problems found in health service policies. In the health care sector of the economy, as in all of society, certain non-economic choices must be made. Objectives for national policies in health must be compromised when they are put in the perspective of all of the nation's goals. For instance, is increased consumption

of health services the answer to maximizing social welfare. It has been suggested that the solution lies not in increased consumption, per se, but instead the fundamental difficulty stems from some of the unique characteristics of the health care industry which result in suboptimal production and consumption of services.

When conceived of as an industry, it would seem appropriate to use the market as the focal point for analyzing the behavior of the industry. In the most basic sense, prices are determined by supply and demand and quantity responds to changes in public demand, the supply of labor and capital, and technology. However, while this may be a valid description of the health services system in the long run, "it is greatly oversimplified and does not take into account its many peculiarities compared with most ordinary industries--such as the shoe or steel industry."[9]

So what is so special about health care? In some ways, health services are like food, clothing or TV's. They can be bought by individuals in the market and insurance is available to protect one from the financial risks of ill health. The difference is that access to qualified medical care can be crucial to a person's life. Since illness does not strike according to vocational ability, character or ambition, it somehow seems unfair that care should depend on these factors.

The Nature of the Health Care Industry

There are aspects of health care as a tradition and as an industry that make an economically efficient operation of the industry extremely difficult. The provision of health services has evolved over the years.

There has been no plan or organization, instead the growth of the industry has been piecemeal and fragmented with no attempt to coordinate various activities. The tradition of separate, private practices is one the physicians (and the AMA) have an interest in defending. Yet this tradition more than anything else has led to the fragmented character of the entire industry today. It has been argued that the small scale of the doctor in solo practice works against efficiency because there can be no organization of services and no specialization or division of labor. Furthermore, this system limits any economies of scale which might be realized in the use of equipment and auxiliary personnel and works "against professional intellectual stimulation and growth."[10] This method of practice limits the physician's ability to provide the diversified care that can be available today.

There is also a problem of vertical fragmentation from the least sophisticated care (often the general practitioner) to the highly technical and up-to-date university medical center. To avoid unnecessary duplication of services as the patient moves from one source of care to another, there is a need for appropriate and adequate communication. In the usual case the individual must find his own way among types and levels of service. No one takes responsibility for seeing that only the necessary care is dispensed in any particular case.[11]

The very real separation between hospitals and physicians' offices and between the different aspects of care itself (ambulatory care, acute bed care, extended care, home care, etc.) makes the application of health services uneven as well as working against any rational plan of treatments

for the individual patient. Another aspect of the fragmentation problem that is very much a part of this institutional separation is "specialty" practice. The custom of doctors specializing in one particular aspect of medicine has its practical side--it allows the professionals (as a collective unit) to master the vast field of accumulated medical knowledge. Thus, the specialist has a very real role in modern health care. On the other hand, the generalist and generalist approach are even more important because treatment is often most effective when directed toward the person as a whole set of systems.

This lack of coordination has not been restricted to the private sector. Community and regional efforts have also suffered from insufficient central planning resulting in duplicated effort, no rational use of resources, and inadequate service to various geographic areas and population groups. From the standpoint of the patient, the delivery of health services must be organized so as to provide continuity. The entire industry "needs radical reorganization in the interests of economy, equality of service and better distribution of services. Yet the barriers to this reorganization--partly emotion, partly self-interest and partly the desire to retain the benefits of free private initiative--are formidable."[12] One of the toughest opponents has been the AMA.

A crucial element in any study oriented towards economics is demand. The vast majority of consumers of health services are very uncertain and lack information with regard to the quality and character of various services and/or products. Consumers are also generally unaware of the range of alternatives available for any given treatment. The information

problem makes real choice based on qualitative judgment difficult or impossible and any kind of price judgment tends to be clouded by personal need.

A common source of knowledge and information in other industries is advertising. The ethical standards of the health professions, however, do not allow general advertising--an otherwise customary source of information on the relative costs and benefits of various alternatives. Another possible source of information would be the professionals themselves, however, they seldom discuss illnesses or treatments in lay terms. The consumer then has no basis on which to make a rational choice. While the patient does choose the physician, it is the doctor who diagnoses the illness and prescribes treatnemt. Their decisions are often made on a basis of comparative medical effectiveness--not marginal cost effectiveness. Some suggest that this situation leads to frequent prescribing of "Cadillac" care where "VW" care would satisfy medical needs as well as being more reasonable on the pocketbook.[13]

Besides being unable to make reasoned decisions on the type of treatment he should purchase, the average consumer is usually unable to determine his actual need for care at any one period or to predict what his needs will be over time.

> "Overall utility of health services is highly uncertain from the point of view of the consumer, and the demand for a sizable fraction of health services is based on the physician's judgment which may or may not take into account the preferences of the consumer and financial ability."[14]

In this industry, consumer demand tends to be partially insulated from the market. Consumption decisions are frequently made by providers

of care and payment is often made by third party insurance agencies. Thus, adjustment of the system to the wishes of those who ultimately pay (the consumer) tends to be slow and imperfect.

The determinant of supply for most commodities is a comparison of net returns from production against opportunity cost measured in terms of what could have been earned elsewhere. Production of health services, on the other hand, is geared to meeting medical needs. Most of the industry claims to be non-profit--even private physicians and dentists are supposed to be motivated more by needs which must be met than monetary profit. It is on the basis of this principle that some private practitioners will justify lowering their fees for the low-income patient.

Investment decisions are generally made according to estimated need (as estimated by government officials or health professionals) rather than return. The economic criteria of demand and profit are of secondary importance. In addition, the medical industry is characterized by a tendency to overbuild capacity. Very specialized, highly technical facilities (e.g., coronary care units) are very expensive but they provide a sense of security to the community--so there are far more of them (provided through taxes and/or insurance payments for other care) than if communities paid for them directly by individual contributions both to acquire and to maintain the units.

Another aspect of supply, especially relevant to the efficiency with which certain commodities are supplied, is the market structure. In the medical and health service industry there is a high degree of monopoly, particularly in the areas of education, certification and licensing of

medical professionals.[15] The reason given for this close control is the maintenance of high quality in the profession. The restriction of entry into medical school, licensing and certification improves quality only when there is a shortage of quality applicants. However, the problem today is not good candidates but instead a shortage of places in medical schools. The following remarks seem a more likely justification for the continued existence of high entrance requirements for medical schools.

> "The income advantages of restricted entry to the health professions are so obvious (the fewer the number of practicing physicians, the higher fees they may charge for their services) that the motive of upgrading quality (as avowed by these agencies actively involved in limiting entry, such as the AMA) is extremely suspect. Society, of course, gains to the extent that quality of services rendered is upgraded. However, limited entry, licensing and certification requirements serve to reduce the mobility of labor resources both within and among the producing units of the industry, causing prices of health services to increase to levels above those that would be expected to prevail in their absence."[16]

The benefits of health services can be comparatively indivisible. Once they have been provided, they can't easily be divided into units, nor can a price be collected that is really appropriate to the true value of each unit. Examples of health services with these characteristics are medical research and most public health programs, e.g. providing better sanitary conditions, pure water, community hospitals, immunization of children, etc. All of these are public goods where the sum of individual demands is unequal to the total benefit of society from these programs. Collective (governmental) action is necessary to achieve optimal outputs. Governmental intervention--through regulations, nationalization and subsidies--affects almost all segments of the health services industry. Besides the large degree of government sponsorship of health

service and medical activities, there are two other major categories of sponsors: private-profit, and private non-profit. This separate sponsorship further aggravates the fragmented character of the system because the three sponsors are motivated by different goals and priorities. In general, they will react differently to changes in the market, for example, "changes in supply of resources, in their concept of incentives to achieve efficiency, in their reactions to changing demands," and so on.[17]

The most important economic decisions as to how resources shouls be allocated have generally been made by professionals due to the assumption that medically technical questions were beyond the scope of the layman. In such decisions where the supplier makes choices for the consumer, technological considerations often override economic ones.[18]

The health professional's principle concern is to protect the consumer from being subjected to random periods of illness. In deciding who should be permitted to consume any service they answer that everyone should be able to consume whatever he requires, the basis for this claim being the belief that health is a right and not a privilege.[19]

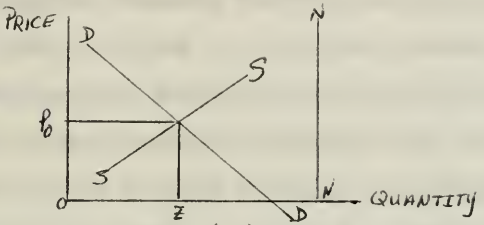
It has been argued that the best national policy would be a combination of guaranteed annual income and a negative income tax (as opposed to a national health insurance program) on the grounds that individual welfare is maximized by income subsidy--not subsidy in kind. However, professional medical opinion is that in the long run, welfare would not in fact be maximized. They argue in favor of national health insurance for two reasons[20]:

1) Consumers, under an income subsidy, may choose a sub-optimal

quantity of health services because they are ignorant of the full range of benefits which the health industry offers.

2) National health insurance allows for pooling of risks--a highly desirable quality in light of the very unpredictable incidence of illness.

In considering the problems in the health services market, questions arise as to the efficiency of production and delivery and also over how much of these services should be consumed.



Demand, Supply and Need for Health Services.

Aggregate consumer demand (DD) intersects aggregate supply of medical services (SS) to show that under theoretical conditions the market would be cleared when OZ units of services are supplied at price of P_0. If the market were perfect, then resources would be allocated according to collective consumer preferences for all things. However, even under perfect market conditions there can exist a shortage of health services as defined by that level health professionals believe to be optimal. NN represents the "ideal" demand curve where ON is the quantity of health services that the professionals believe should be consumed. To say that in the 'perfect market' a shortage of consumption of health services exists equal to ON-OZ is a normative statement not base on market criteria.

In a normative sense, there can also be another type of sub-optimal condition. For any given distribution of income and wealth, there is an optimal allocation of resources. The distribution of health services

among consumers depends largely on the distribution of income and wealth. Most likely, those with higher incomes consume more health services. So if consumption is judged sub-optimal, this condition would primarily be due to inequalities in distribution of income and wealth. Shortages, then, can exist in the distributional sense as well as the aggregate sense as shown in the diagram.[21]

As our discussion indicated, the efficient allocation of resources in the medical field is impeded by the following factors:

1) imperfect consumer knowledge--with respect both to his medical needs as well as to the alternatives available to him for treatment;

2) general failure of profit and other market incentives to induce efficient production;

3) many of the services are public goods which are never able to achieve optimal allocation through market proceedings;

4) decentralization and diffusion of organization supervision and regulation; no one can be held accountable for efficient production of services. Taken all together, these conditions emphasize that demand and supply in the medical market fall far short of the concepts employed in idealized theoretical analysis; thus resources are not being allocated efficiently. This leads to a conclusion that "at any given price level, it is likely that society is obtaining fewer health services than would be the case if the market were allocating resources efficiently."[22]

This decentralization which pervades the entire industry allows maximum freedom for all those participating in it--both those demanding and those supplying services. The patient is free to choose the physician,

dentist, etc. of his choice; the practitioner is free in his choice of geographic location, practice arrangements (e.g. hours) and fees. The patient is dependent on his doctor for admission into a hospital, however. He can only enter one where his doctor has staff privileges. In selecting drugs, the patient is also dependent on the doctor--for a prescription is necessary to obtain most medicines. It would appear that the greater advantage of decentralization and freedom of choice belongs to the supplier of health services.

The piecemeal approach to providing these services has led to serious maldistribution of manpower and facilities in terms of need. According to the statement on health by the Committee on Economic Development, there are four major manifestations of the failure of market mechanisms to allocate resources efficiently[23]:

1) Shortage of primary care. Primary care consists of those services people most frequently use for their ordinary needs--the everyday tasks of the general practitioner. Primary care is the first step in seeking hospitalization and it is the basis for establishing continuity of service; the preventive and diagnostic aspects as well as care for chronic illnesses. There is a notable shortage of general practitioners and this deficiency is more crucial to overall health care than a shortage in any particular specialty. Not only do specialists see fewer patients per hour, but an excess in some specialties can lead to excess treatment.

2) Surplus facilities. This problem is an offshoot of uneven distribution, as the surplusses generally are found in cities. In better organized systems, much hospital use could be averted by greater use of ambulatory care. Present hospital space could be more effectively utilized if the practice of "week-end storage" ceased. Most hospitals tend to run

on a Monday-Friday schedule, those patients who cannot leave Friday afternoon often must stay until Monday. Likewise, beds that are not filled on Friday generally stay vacant over the weekend.

3) Poor utilization of manpower. This situation worsens the shortage of trained personnel.

4) Uneven distribution of services between urban and rural areas. The justification for this has often been that affluent areas, with the incentive of wealthier populations, have tended to draw the best of both human and technological facilities. However, critics have pointed out that it is not affluence or wealth, per se, that attract new facilities; as there are many very wealthy suburban and rural areas. The alternative reason frequently given for the large concentration of facilities in highly populated areas is that it requires a large number of people to generate a need for complex facilities or the ability of a man with a very specialized education. As these facilities begin to settle in urban centers, the theory is that they tend to attract other complex facilities.

One consequence of this problem of uneven distribution of resources is the accessibility of services to those who require them. The determining factors here are, in addition to the physical availability of manpower and facilities, the prices of services relative to the consumer's income (plus insurance coverage).

With regard to the physical availability, there have recently been forecasts by various consultant groups that by 1975 there will be serious shortages of almost all kinds of health personnel. And yet, relative to other countries (which have lower infant mortality rates), the U.S. has

more physicians, dentists, and nurses per 100 people.[24]

Geographic Disparities in Health Care Facilities, 1966 (Rates per 100,000 population).

	Physicians in private practice	Active dentists	Active nurses (professional graduate)	Hospital Beds (short-term)
New York	136	67	388	444
California	134	50	324	352
Colorado	126	53	370	432
Massachusetts	122	58	502	447
Connecticut	121	57	440	325
North Carolina	71	27	231	350
South Dakota	73	39	270	470
Arkansas	68	28	120	335
South Carolina	64	20	214	325
Alaska	65	26	287	218
Mississippi	60	25	142	322

Source: Statistical Abstract of the United States, 1968, p. 67

> "More than any other factor that has stimulated public concern regarding the health services industry is the recent spectacular rise in the cost of medical care. Medical care prices have been rising faster than other prices throughout the post-war period. . . . After 1955, first hospital charges and then professional fees took off at a rate much higher than the rise in general consumer prices."[25]

One area of medical care prices--prescriptions and drugs--has risen more slowly than other medical care and even more slowly than prices averaged in the consumer price index. Prices of optometric examinations and eyeglasses have tended to follow the general price index. One explanation for these two exceptions is that they are in the private, profit-making sector of the economy and thus have faced the conditions of competition.

Demand for medical services has been growing steadily due to rising consumer incomes, increased avaliability of insurance and greater financial outlays in the health sector by governments at every level. These conditions,

in combination with the inability or unwillingness of the industry to expand supply to meet demand, are principal factors contributing to the rise in costs.

> "People in 1967 were enjoying $11.1 billion a year worth of services beyond what they had been receiving in 1950. This would seem to be a fairly small return for the $32.8 billion of increased expenditure--especially when it is by no means clear that the health of the nation improved materially during the same period."[26]

The above statement implies the major question behind most of the inquiries and studies of the health industry--whether or not the expenditures and efforts directed toward health are actually producing commensurate returns in the health of the American people. However, it may still be too soon to evaluate or draw final conclusions about the effectiveness of the more recent and very large investments by government.

One commonly used method of evaluating "our" health is by comparing statistics of the United States with those of other nations:

- 15 nations have longer life expectancy at birth
- 13 have lower infant mortality rates
- 5 have lower maternal mortality
- the U.S. is behind in controlling deaths from TB and pneumonia
- the U.S. spends the most on health, per capita.[27]

While this evidence is not conclusive, it does raise serious questions about the relative effectiveness of our expenditures.

The incidence of illness and resulting medical costs is highly unpredictable from year to year and from family to family. Some have catastrophic burdens while others are almost free of financially-straining medical costs. Yet, all must face the <u>risk</u> of heavy costs. Many authorities

have concluded that under these conditions, the desirable system of payment is one in which all families share the cost and no family faces ruinous burdens. Four possible methods exist of meeting this need: prepayment of health services, private insurance, payment by employers for health services for employees, payment by national government from general tax revenues to all eligible families. At present, all four are in practice, some families fall under more than one category and many have no coverage at all. Even for those who have some coverage, it usually is not comprehensive and there are some costs which must be met on a fee-for-service basis: "in 1968, private health insurance met less than 5% of consumer expenditures for all health services other than hospital care and physician services."[28] As the use of health insurance has increased, it has greatly reduced the number of Americans openly vulnerable to economic risk due to illness. Today there are approximately 160 million people, or slightly more than 80% of the population, covered by some form of private health insurance. Twenty years ago, barely 50% of the population was covered.[29]

Despite the great increase in private coverage and the added government coverage (Medicare and Medicaid) there are still some 20 to 40 million citizens without any health insurance coverage. Many of those who <u>are</u> covered are not really protected from the financial burden of ill health. Total national health expenditures in 1950 were $12 billion, in 1972, the nation spent $83 billion. The largest element in the increase--about one-half--is attributed purely to rising prices, not greater utilization of services. The rate of inflation for the cost of medical services since 1960 has been more than 1½ times as much as general price inflation.

Not only does this type of trend cause insurance premiums to go up, but it also increases the individual fee-for-service expenditures relative to other expenses.[30] Thus, the total result is that in spite of having medical insurance, it is increasingly expensive for the individual to be ill.

In 1965, Congress passed legislation which attempted to ease the financial burden of medical care to certain segments of the population. It enacted Titles 18 and 19 (Medicare and Medicaid) as amendments to the Social Security Act. For those who qualified, there were significant changes in the provision of health care.

Briefly, Medicare includes[31]:

·all persons 65 and over. Nominal deductible and subscription provisions (although these are rising).

·original legislation intended to reimburse suppliers at cost or reasonable charges.

·costs of a large spectrum of treatments covered.

·Federal standards had to be met.

Medicaid is a scheme by which the federal government helps states finance health care for low-income families. The individual states determine the level of medical indigency (and therefore who is eligible for assistance); they also define which costs are to be covered by public funds. To qualify for aid, states are required to set up an administrative machinery, cover a minimum set of services, and must show evidence of progressing toward a goal of federally-independent aid programs for the medically poor. In principle, Medicaid can fill in between Medicare and private coverage.

However, both programs, Medicaid more so than Medicare, have experienced difficulties meeting their objectives.

The Health Industry Today: Health Care Cost

As the cost of health care grows proportionately larger each year there is the inevitable question, what are we getting for our money? Cost data is an essential tool for analyzing the various issues in the organization, finance, and delivery of health care.

The two cost phenomena most noted in health delivery systems are first, high costs along with a rate of inflation persistently higher than the average rate, and second a very disjointed system for delivering services. Realizing that the second condition aggravates the inflationary tendency, critics focus increasingly on the delivery system in terms of its productivity, adequacy, and effectiveness.

As has been emphasized, it is the controversial element, "cost of medical services", that has more than anything else led to closer scrutiny of the system. It is useful to review some of the basic statistics regarding size and relative proportions of expenditures in order to have a better understanding for the urgency of these issues.

·In the fiscal year ending June 30, 1969, the nation spent $60.3 billion on health-related expenditures. This was a 12% increase over the previous year.

·The per capita expenditure was $294; four times the level for fiscal year 1949-1950. This represents an average annual increase of 7.2%.

·Health expenditures have grown faster as a share of the nation's

total output of goods and services than the total output itself. From 1950-1969, health expenditures as a portion of GNP increased by 46%; in the 40 years ending in 1969, health expenditures grew by 86%.

·The major factors contributing to the inflationary trend in health care expenditures are the continuous enlargement of demand for health services, add to this the recent sizable government expenditures (e.g. Medicare and Medicaid), new methods of financing (e.g. health insurance), scientific and technological advances, and large increases in health care prices.[32]

These observations show the trend of growth in total spending on health care over the past years. Another aspect of national spending on health is the financial flow through the system, that is, who is making or receiving these payments?

·In fiscal year 1972, expenditures for medical services totalled $63.4 billion, of which 92% was for services and supplies, the remainder for construction and education.

·$71.9 billion, approximately 66%, were private, personal expenditures. Over one half the industry is in the private sector. Even after taking into account Medicare and Medicaid, private sources account for 61% of total health expenditures.

·Public sources are increasingly from the federal government[33]:

	Shares of national health expenditures	
	1966	1972
federal	12.8%	25.8%
state and local	12.9%	13.5%

Various reasons are offered for the increase in total expenditures: growth of population, changing prices, per capita utilization as well as larger individual incomes, growing health consciousness, increased public support of health care for the poor, and rising regard for medical professions as a life-saving/enhancing essential. Americans desire improved health services and more of them, however, a major frustration in achieving this goal has been the spiraling prices. Much of the large increases in per capita expenditure to achieve a greater volume of services is counteracted by price inflation. The relative influence of price, population, and per capita use on rising costs vary over time. From 1965 to 1968, these factors contributed 74%, 9%, and 17%, respectively, to increases in national expenditure.[34]

An even sharper contrast can be drawn by comparing the percentage change in the index of all prices against the percentage change for medical prices alone. Taking the years 1946-1971, all prices rose by 107% and medical prices rose 189%. This is an average annual increase of 3.0% versus 4.3%. The most inflationary component of medical prices is the hospital daily service charge--over the 23 year period they increased 769%, nearly seven times as fast as all prices.

As medical care prices have experienced a rate of inflation markedly higher than that of the general price index, there has been growing public concern over the ability of the average family to meet the financial requirements of the most basic level of care.

The conditions most often put forth as causes of medical price inflation are first, the rapidly increasing demand due to the rising level of income, the growing popularity of private insurance and Medicare and

Medicaid. Associated with an increasing demand is a supply mechanism paricularly slow to expand. Another big contributor to the inflationary situation is the rising use of insurance coverage. Two other elements in the significant rise in medical care costs are the growing demand for very expensive, highly complex techniques, and the rise in overall wage-level of hospital workers.

The methods of financing health care expenses have not worked notably to distribute the burden of expenditures among individuals or in allocating resources for various services according to need. While most people have at least some health insurance, for many it is inadequate, and what coverage there is has a significant effect on the behavior of the patient and provider in the market. The amount paid by the patient is only part of the full cost, a residual payment after the government or private insurance carrier has made a contribution. Therefore, the price to the consumer is lower than the actual price charged, even after allowing for premiums. This leads to an increase in demand for services, particularly those covered fully or in part by a third party payment. Reductions to the consumer are greatest for hospital and surgical care, but often zero for preventive care. Since a large proportion of the consumer demand decisions are made by the provider, one might note that the increase in demand for certain services is provider-induced.

Despite increased private and government insurance coverage, personal expenditures have continued to grow[35]:

	1965	1972
private insurance benefits	$ 8.3 billion	$19.0
public expenditures	7.0	24.7
direct individual payments	17.6	25.1

Generally, one would expect an increase in resources to lead to lower prices and higher utilization. In the medical industry, this process does not hold true; instead, extra personnel and/or equipment leads to even greater utilization, higher prices, and eventually, increased government payments. So an excess of surgeons, for example, will not bring down the cost of surgery but will result in an increase in the number of operations. This brings us to the point that while medical manpower and equipment need to be increased, such increases should be selective and accompanied by a planned organization.[36]

> "Until the providers of care work within a system which requires them to respond to effective planning that meets national needs and to become involved in the consequences of their decisions, costs cannot be controlled and the system cannot be rationalized. Such involvement is now being sought in new forms of organization and new methods of reimbursement that would require providers of health care to share in the risk."[37]

Three conclusions[38] can be drawn about the present system of providing health care. First, the faulty allocation of resources is a major cause of the inadequacies and inequalities in American health services, which in turn result in poor or substandard care for segments of the population. Manpower, facilities, and services lacking in some areas are in excess elsewhere. Then, in addition to geographic maldistribution, there is a very real problem with functional imbalances: serious inadequacies in primary care exist, while certain specialties exceed the requirements. As can be seen, the market mechanism has not worked well in this segment of the economy. Due to distortions in incentives and pricing, the market operates below its potential capacity.

Secondly, there is a base already provided by private and public health insurance plans which can be used as a foundation for building

improvements into the system of financing health care.

Thirdly, alterations should be made step-by-step to achieve lasting results. Reaching the ultimate goal will be a "phased" process. The only policy that could have immediate direct effects would be a short term solution: price controls. Pouring large amounts of money into the health economy through a new system of finance or through some expanded form of national health insurance will result in further distortions of demand, pricing and resource allocation.

The Effects of existing Government Policies

"Deciding what is the appropriate federal role in providing health insurance and designing a system to carry it out pose some of the most difficult problems of social policy facing the government and electorate today."[39] Conflicting objectives which the federally sponsored programs seek to accomplish must be reconciled. Even if a viable legislative form can be achieved, there are still the interests of political pressure groups to be taken into account.

The objectives common to most of the present proposals for expanding the federal role in providing health services include:

1) removing financial or geographical barriers for the poor to receive essential services, and

2) preventing financial hardship for middle income families with very large bills. Purchasing adequate health care is an excessive financial burden for the poor even under the ideal insurance system. For families of middle incomes, average expenses and standard health coverage are not

impossible goals; but for those who experience major health catastrophes, medical expenses can bring dire financial strain and private protection will not offer adequate protection.[40]

Not only is consumer dissatisfaction growing and being increasingly articulated, but government officials also are becoming alarmed that there will be a serious financial problem if medical costs continue in their present trend. At the present rate, all of HEW's budget will eventually be spent on health care with nothing left for other HEW projects "depriving it of new initiatives in its wide range of other responsibilities and depriving it of priority judgments."[41] At present, it is Medicare and Medicaid that constitute the major portion of HEW's medical care budget. The size of governmental contributions, to the various health care programs is growing: Medicare expenditures in 1968 were $6 billion and Medicaid, for the same year, cost $4 billion. Government at all levels spent a total of $21.2 billion for medical care. Yet these programs assist a very small portion of the total population. Medicare is aimed at helping the aged, (and actually covers only 45% of the expenditures of the aged), while Medicaid reaches only a small fraction of the poor and near poor. There are many who still need help but for some reason do not qualify for aid. The cost of helping those who do qualify is getting increasingly out of hand.

The government has been continually frustrated in its efforts to assist the medically indigent and the result is a more recent effort to closely and critically re-evaluate the goals of their programs as well as the methods being used to reach them. There are grave doubts about the

present allocation of government resources in this field: "doubt for example, about whether it is equitable or wise that about one-half of all government payments for personal health care is spent for the aged. . . ; and more fundamental reservations about the division of expenditures between purchase of services and building an adequate supply capacity--a difficulty perceived to characterize the entire health economy as well."[43]

A number of factors have seriously complicated and confounded the efforts of the government since 1966. The government itself has been a major contributor to the imbalance between demand and supply through its substantial influence in expanding demand. Clearly reforms are called for in the health delivery system and in the financing arrangements if very serious problems are to be avoided.

The responses undertaken to date to the problems posed by the health services industry have been legislation with the goal of reducing inequities, increasing accessibility, increasing supply, encouraging reorganization in order to raise efficiency and overall effectiveness. However a number of the government efforts such as the Medicare and Medicaid programs which are designed to spread risks and remove obstacles to consumption by aged and poor have tended to encourage excessive and wasteful use of services. This is characteristic of health insurance programs in general. When all services are paid for on a fee-for-service basis by the individual family there is obviously a strong incentive to restrict use to only that which is most essential. But when bills are pre-paid or paid by a third party (such as insurance companies or the government) the individual and the supplier have little or no incentive to conserve scarce resources. So, the

objective of spreading risks contradicts the objective of restraining use of services.

The major advantage of Medicare over conventional private insurance is that it provides more comprehensive coverage. Private insurance tends particularly to encourage demand for high-cost services because expenses incurred through use of expensive facilities is covered whereas diagnostic and preventive care is not. The restrictions on protection typically found in private insurance contracts are intended to limit coverage to major costs and leave smaller ones to the family, thereby providing a kind of cost incentive. However such programs still have the effect of encouraging the wasteful use of elaborate facilities. Furthermore, they tend to distort the overall pattern of care by encouraging some expenditure and discouraging others. The designers of the Medicare program attempted to guard against over-utilization by limiting hospital coverage and including deductible and subscription fees.

The Medicare/Medicaid legislation has an additional problem in its large administrative requirements. Health professionals must be familiar with the provisions of the law so that they can advise patients and generally administer the system. They also are required to fill in the necessary re-imbursement forms. Sometimes reimbursement is delayed causing public frustration and complaints. The Social Security Administration may even refuse to grant payment if the price for a particular service is thought to be unduly high with regard to the norm. Reimbursement today is made according to"customary fees" schedules established in 1968. Freezes of this sort result in many physicians refusing to see patients covered by the national insurance. Therefore, many of those

whom legislation was originally intended to benefit have actually found themselves worse off.

Another weakness of Medicare-type insurance is that reimbursement at "reasonable cost" certainly does not encourage cost control and even invites padding of costs as well as expansion of industry without sufficient effort to combine resources in the most efficient way. What cost and utilization controls have been included in legislation depend on the medical personnel for enforcement--i.e. self-regulation by suppliers.

As long as there is reimbursement at cost, inefficient institutions will continue to operate or even expand. On the other hand, there has been an increase in the number of proprietary investor-owned hospitals. Perhaps, the entry of these tax-paying institutions will force non-profit hospitals to become more efficient and to set prices more rationally.

The Comprehensive Health Planning Act, 1966, encourages states to develop comprehensive health planning programs and to establish criteria of need for new facilities. The Regional Medical Program, of 1966, provides planning grants to coordinate on the regional level with the aim of improving efficiency in prevention, diagnosis and treatment of heart disease, cancer, stroke and related diseases. Both of these bills have their drawbacks but they are a step in the direction of more stringent efficiency considerations.[43]

As has been demonstrated, many lessons may be drawn from an analysis of the experiences of earlier government programs which were designed to alleviate the problems of the health system. Any new attempts to reform or improve the system should take heed with regard to the following[44]:

1) Attempts to analyze and effectively control costs must be done in the context of the entire system of financing, organizing, and delivering health services.

2) "It is illusory to believe that we can, or ought to, prevent health care costs from rising." Instead a more appropriate goal is to keep the rise in these costs in line with the general economy and commensurate with added value of the product.

3) As the health economy expands through more and more public investment, there will be increasing demands for controls.

4) Increasing control over the activities of the health sector of the economy, requires the development of more precise and informative means for evaluating expenditures and their consequences.

5) While we must seek diligently for more effective and equitable use of the resources invested in health services. It is necessary to keep in mind that health services alone do not insure good health. Full equality of services for the poor will not mean their health status will become equal. Health services will not overcome disadvantages of poverty such as inferior housing, food, recreation, and education. And as Professor Somers reminds us in his article on health care costs, the principle of diminishing returns applies with respect to increased investment in health. And we must, as he points out, raise the question: "In terms of health objectives, at what point is it counterproductive to invest in marginal increments to health services in preference to other social needs? The time for frankly acknowledged choices may not be far away."

6) Reforms should make greatest possible use of existing elements

of the system that can be developed, for example, employer-based insurance schemes, in order to provide continuity.

Making decisions on the level of and distribution of government expenditure for health care is a complex and difficult task. A. J. Culyer, in an article in the Oxford Economic Papers, presents a strong argument favoring increased use of cost-benefit analysis and development of a more rigorous social welfare function. Refining these tools would provide a foundation in economic theory on which policy prescriptions could be based.

Culyer believes that, to date, policy decisions have been made without sufficient analysis of theoretical explanations linking observed characteristics of health care with policy conclusions.

The most commonly held goals for reforming the system of health care are to achieve more productive use of resources and to maximize the level of the nation's health. Of course, an accurate measure of the level of a nation's health has not been developed; but assuming such a measure existed, "the unconstrained maximization of such a level is an absurd objective since it seems unlikely that the state of negative (or zero) marginal returns would be achieved short of incredibly large investments in health."[45] Thus, it seems a more reasonable objective for reform programs is to achieve an "optimal use of resources by carefully weighing costs and benefits of alternative programs and methods of treatment."[46]

Culyer's work attempts to determine if the commodity health care is "different in particular and crucial ways [so] as to make some forms of organization of the health industry intrinsically inefficient and other

intrinsically efficient."[47] The commodity, health care, has some characteristics in common with other public goods. He notes that as is true of public goods in general, the purchase and sale of health care includes: direct involvement of the consumer in the production process, difficulty of separating consumption and investment elements, and very substantial costs falling on some individuals. However, the emphasis of his work is on the significant differences between health care and other areas of consumption. In this connection, he cites the topics of consumer rationality, uncertainty and external effects.

The theory of welfare economics assumes that the consumer is rational. A rational consumer is able to judge what serves his own interests and makes his choices in the market according to his preferences. With regard to the nature of consumer rationality in determining the demand for health services, Culyer presents evidence which contradicts this assumption and thus weakens the case for optimization of welfare in open markets for health care. This evidence includes three categories:

a) consumers, who are sick but do not desire treatment and may even be ignorant of their sickness,

b) the mentally sick who do not fit into a 'consumers sovereignty' model, and

c) patients requiring emergency treatment. They are frequently not in a position to reveal their preferences.

Culyer uses observations from the Peckham experiment, 1935-1939, to illustrate that consumers often are ignorant of their need for treatment. 64% of the persons examined had identifiable disorders of which they were

unaware. A similar study carried out in 1964, estimated there were 150,000 unknown diabetics in Britain, and speculated that analogous problems exist in other countries. It is possible to interpret this evidence of patient ignorance as pointing to a fundamental deficiency in attaining an optimal level of care through the open market.[48]

Of course, consumer ignorance exists to some degree in all markets. The more important question to be raised is what is optimal ignorance? In the British experience there does not seem to be a greater general knowledge of personal health needs since nationalization of the health services; nor that a nationalized health system devotes more resources to prevention than any other system. Specifying an optimal distribution (in this case, knowledge) does not indicate the most appropriate form of social organization for attaining or approaching that optimum. With regard to consumer ignorance, there has been little, if any, improvement under nationalized health.[49]

A similar conclusion can be drawn for those who know they need treatment but fail to demand it. Given their preferences, information, fears, etc., there is no reason for supposing that they are behaving irrationally, nor that they would behave differently under an alternative system. The same reasoning can be applied in the case of the emotionally disturbed and emergency cases. If there is evidence that they are actually behaving irrationally or are not in a position to choose, then welfare economics has nothing to say about their subjective utility maximization because welfare economics is based on an assumption of rationality.

Turning now to the role of consumer uncertainty in the demand for

health services--there are four characteristics[50] of the demand for health services which may affect the ability of an open market to satisfy the necessary optimal conditions:

·He frequently will be unable to calculate the cost he will incur in receiving medical treatment.

·He is frequently ignorant about the quality of the care he receives.

·Fair insurance may not be obtainable.

·Moral hazard prevents an optimal insurance pricing structure.

Culyer notes a third set of characteristics that may have implications for the form of organization suitable for production and distributing health services. These he defines as being "problems of external relationships."[51] The issue of communicable diseases is certainly a problem of external relationships because benefits of immunization accrue to others in the society besides the individual. Then there is the problem of ensuring that sufficient capacity is available for those who do not currently require, for instance, hospital beds, but who value the existence of capacity sufficient to ensure them a place should they require it at some later date: the idea of excess capacity. Finally, and possibly most important in health care, is the problem alluded to previously concerning individuals who, though possibly behaving perfectly rationally, may not consume sufficient health care in the opinion of other individuals in society. This may arise either because of a low income level or because of uninsurability due to chronic and costly illenss, or for other reasons and factors which may shape a person's preferences and circumstances.

While the nature of health care is different from other goods,

itemizing the differences tells us nothing about the most efficient way of producing or allocating the commodity. Observing market imperfections is not the same as proving inefficiency, even when comparing the existing situation to a hypothetical ideal. In a consideration of welfare economics, the imperfection must be shown to be Pareto-relevant. And finally, it must be remembered that the choice between institutions is never between the perfect and the imperfect. Decisions must always be made in a world of second best where each case is judged on its own merits. The reason that an open market will experience spillover effects (i.e. unexploited gains from trade) is that institutions required to internalize such effects are too costly relative to the value expected to be gained from them. So, in the 'real world' even Pareto-relevant externalities may be inefficient to remove. An open market with externalities may not be really significantly inefficient.[52]

Culyer concludes that greater use should be made of cost-effectiveness and cost-benefit analyses to improve existing institutions and to better understand their general efficiency. He closes with the following remark:

> "The heady atmosphere of grand designs has to be replaced by the mundane, but ultimately more fruitful, ground of systematically applied economics---cost-benefit, cost-effectiveness, and output budgeting to improve the efficiency of allocation within existing institutions; statistical and econometric estimation of production and demand functions to improve long-run planning and forecasting; and systems analysis and positive economics to assess the consequences of different institutional frameworks of health care. In this scheme of things the role of welfare economics is to provide an appropriate theoretical base on which to build empirical studies and not to prejudge the facts."[53]

New Attempts to Achieve Efficiency

The growth of the American system of health care delivery has allowed

the various branches of the industry to develop independently of each other. So, it is no wonder that we find little, if any, coordination of activities within the industry. Due to its non-profit motive, the system's emphasis is heavily weighted to a concern for quality and effectiveness. With little incentive for economy, there has been resultant inefficiency in the use of resources. The costs of medical services have risen as fast or faster than per capita income and insurance coverage. These combined factors have led to ever-increasing outlays on the nation's health. In light of the industry's organization and past performance, health policies neither increase accessibility, efficiency or effectiveness.

To bring some kind of economic consciousness to the system as it stands seems impossible--a major re-evaluation of the organization, administration and operation of health care delivery is in order. Such a re-evaluation could include consideration of several alternatives:

- turning all of the industry to private enterprise,
- increasing government control through public utility type regulations,
- using grants from the government to induce control and reform,
- making medical care a public operated industry, as in the British National Health Service.[54]

One of the first steps to improving the entire system is in the hospitals. Hospitals have always encouraged prepayment and insurance plans. It is this kind of payment by 3rd party funds which has led to overuse of expensive care.

What is even more needed is reform in hospital administration so that administrators have clear authority to stick to an operating plan.

Governor Rockefeller's Committee on Hospital Costs (1965) made several recommendations for increasing hospital efficiency:

1)All hospitals should be included in local planning agencies concerned with health needs and facilities.

2) Convert underutilized beds to other needed uses before constructing a new hospital.

3) Begin full operation of hospitals on weekends.

4) Make all necessary and feasible consolidations conversions and closures.

5) Strengthen hospital management through exchange of data and technical assistance to help with problems.

6) Improve statistical reporting by standardizing categories and definitions.

7) Expand existing programs for grants and loans for building new facilities.

8) Establish cost incentives that involve the hospital in some financial risk.[55]

The hospital must play a central role in any health care system. The degree to which it is involved in any new delivery structures depends on the success of internal restructuring as well as its accessibility to and participation in community organizations.

Most of the initiative for improvement has been taken by the private sector particularly with the growing acceptance of group practice and prepaid medical service plans. The most popular, and one of the largest models for this method of organization and delivery is the Kaiser Prepaid

Medical Service Plan--an employees health care plan introduced by the Kaiser Corporation of California. The success of the Kaiser Plan has given impetus and support to the recently legislated (December, 1973) Health Maintenance Organization Act.

Since the Kaiser organization is the model for many existing and proposed efforts towards group practice, prepaid medicine, it is useful for our purposes to observe the basic principles on which the Kaiser Health Plan was founded and operates.

The key to the structure of the Kaiser-Permanente Program is unification. It is unified in organization through the use of formal contracts and managerial arrangements. Financing is unified because revenue from all sources is pooled within each region. It is unified also in delivery of services because the services offered and the arrangements under which they are provided are the same in each region.[56]

The Kaiser-Permanente Health Program can be divided into three branches: the Kaiser Foundation Health Plan, the Permanente Medical Groups, and the Kaiser Foundation Hospitals.

The Kaiser Health Plan is an administrative and contracting organization. Its functions[57] include enrolling health plan members, maintaining membership records, collecting dues, providing facilities. It also arranges for services by contracting with medical groups and hospitals--this factor, in particular distinguishes Kaiser-type arrangements from most commercial insurance. Even under a Blue Cross/Blue Shield plan, the responsibility of the organization is strictly a financial one. The member must obtain his own medical and hospital services as best he can.

Kaiser, on the other hand, assures that these facilities will be available and that the services will actually be rendered.

A final function of the health plan is to define [illegible], and to set basic and supplemental rates.

The Permanente Medical Groups[58] are responsible for providing all professional services of physicians and paramedical personnel. If they are not able to provide all services through their own staff, then they must make arrangements for members to receive the services through "outside" facilities. The medical groups assure medical and related benefits to members. The groups are independent professional organizations legally separate from each other. Their connection with the Kaiser Foundation is by contract.

The Kaiser Foundation Hospitals,[59] like the individual medical groups, is a legally separate and distinct corporation closely associated with the health plan. The hospitals, as would be expected, provide hospital rooms, dietary services, nursing care and the usual hospital facilities.

At those times when a member must find emergency services at non-Kaiser facilities, the plan will provide cash re-imbursement. While the Kaiser-Permanente program exists for the enrolled membership, it also has a place in the community at large. Non-plan members can be (and are) treated by the medical groups and the hospitals on a fee-for-service basis. The fees from these services are pooled with all other revenues to support the total program.

The Kaiser Plan is not a monolithic program. The hospitals and medical groups are geopraphically separated from each other as well as being

legally independent entities. For example, there are six Permanente Medical Groups dispersed throughout the country; primarily concentrated on the west coast. There is one in northern California, southern California, Portland, Oregon, Hawaii, Ohio, and Colorado. Aside from being contractually associated with the Kaiser Foundation and following a certain manner of organization (to be discussed below), the medical groups and hospitals exercise a "decentralized management and a high degree of regional autonomy" thus providing "a framework for diversity of approach and experimentation in different regions."[60]

Dr. Ernest W. Saward, medical director of the Permanente Clinic in Portland, Oregon, strongly believes that it is the particular manner of organization that has made Kaiser a success where other prepayment group practice plans have failed. He characterizes these organizational links within the Kaiser-Permanente system as a "genetic code". According to Saward, without the complete genetic code the prepaid group plan will be weak. While different medical groups will vary in some respects (whether within Kaiser Permanente or not), they must all follow the same basic principles.[61]

First, they must be non-profit motivated and financially self-sustaining in the long run. With regard to the latter point, grants may be necessary to get started but after operation and membership has been established the plan must become self-supportive. Membership payments for certain groups may have to come from taxes, but this does not contradict the concept of a self-sustaining program.

The second principle, prepayment of fees on a monthly basis, tends

to mutualize the cost of care. No fees are required at the time of service; prepayment entitles members to all services offered.

A third basic is that all services should be delivered by independent and autonomous medical groups. It is this type of group that contracts with the Kaiser Health Plan. All income to the group, whether prepaid dues or fee-for-service, is pooled. The members of the group are full-time specialists who practice in the group facilities. Another aspect of group practice is that peer review is an integral part of the organization. Members of the group are strongly encouraged to increase their formal education.

A fourth necessity for successful group practice is a medical center whose integrated facilities include a hospital, an ambulatory care clinic and neighborhood clinics to disperse primary care in the area served. All these facilities use a single set of medical records.

Accounting and administrative services are centralized in the interests of economy and efficiency.

Point five: it is very important that enrollment be voluntary. At least one alternate choice of health care plan should be available and enrollees must be allowed a periodic option to re-enroll or leave the prepaid system.

The final essential characteristic is capitation payment. All personnel employed by the medical groups and the hospitals are to be paid a flat, negotiated sum per individual enrolled in the plan. This is meant to be an incentive to make better use of preventive care and also to cut down on unnecessary treatment.

Hospital Use Under Different Types of Plans

Hospital Days per Thousand Persons Covered by the Federal Employees Benefits Program

	1962	1964	1968
1. Blue Cross-Blue Shield	882	919	924
2. Insurance	760	919	987
3. Group Practice Plans	460	453	422
Selected Plans:			
Group Health Association, District of Columbia	462	484	363
Health Insurance Plan of Greater New York	483	612	459
Group Health Cooperative of Puget Sound, Seattle, Washington	372	467	364
Kaiser Foundation Health Plan, Oregon Region	350	475	254
Kaiser Foundation Health Plan, Northern California Region	500	474	468
Kaiser Foundation Health Plan, Southern California Region	378	381	428
Kaiser Foundation Health Plan, Hawaii Region	705	522	357
4. Individual Practice Plans	538	530	471
Selected Plans:			
Foundation for Medical Care of San Joaquin County, California	458	578	390
Group Health Insurance, New York	547	673	652
Hawaii Medical Service Association	535	483	433
Seguros de Servicio de Salud de Puerto Rico	658	644	553
Washington Physicians Service, District of Columbia	531	523	438

Source: U.S. Health Services and Mental Health Administration, The Federal Employees Health Benefits Program (1971), p. 11. (CED Statement, p. 57.)

of Prepaid Group Practice", noted the lower incidence of possibly unjustified surgery (e.g. tonsillectomies) and a tendency to greater use of preventive.[64] Experience with hospitalization under Medicare, Part"A", in the Kaiser-Portland PGP has shown an average of 1800 acute-care general hospital days per 1000 patients a year, as compared to a national average of 3600 acute-care days.[65] The cost per day of hospitalization for any individual was four times as great in 1950 as in 1966 under the Kaiser Plan. This is the same rate of increase as shown by the nation. However, for the same period of time, hospitalization costs per member per year only doubled. Thus, savings in hospitalization costs for Kaiser-Portland population are due to a decreasing number of hospital days per member.[66]

Finally, and what may be most significant of all in future evaluations of effectiveness, is the fact that most PGP's have major research units which continually assess performance. This type of study rarely occurs in other segments of the medical care industyr.

A frequent criticism of the PGP is that it deals best with a large working population and cannot handle the full spectrum of the socio-economic population. However, two PGP plans under Kaiser: Bellaire, Ohio, and Portland, Oregon, were initiated as OEO Neighborhood Health Centers. The Portland proposal was approved by OEO in 1965 and funded under their Research and Development Program. The original objectives of this attempt to operate an OEO center were[67]:

1) to provide high quality, comprehensive family health services to a low-income population within the framework of an ongoing, PGP medical care plan;

2) to educate the population to utilize services by training low-income residents to serve as neighborhood health coordinators;

3) to study any differences in the utilization patterns of indigent and non-indigent populations when financing does not present a barrier to care.

Funds from OEO and other sources provided 1200 low-income families with complete health services. The total cost per family per month was $40.92.

These two programs, as well as other PCP programs have demonstrated "the feasibility of organizing medical care in the private sector. . . and successfully serving large populations which require public financing."[68]

Drs. Greenlick and Saward tribute the savings of group practice medicine to systems efficiencies and not efficiencies of scale. Greenlick notes that "by integrating, financing and organizing medical care, PCPs can reduce incentives for the physician or population to prefer services be provided on an in-patient rather than out-patient basis."[69] In a joint article, they argue that ". . . the more relevant measure and the one that really defines the impact of the system efficiencies, is the number of physicians and other personnel required to provide the total medical care services for a population."[70] A study by C.M. Stevens in 1971 estimated that if the ratio of physicians to the Kaiser-Portland population equalled the ratio for the entire country, then we would need 10% fewer physicians. The basic question of Stevens' research illustrates the concept of systems efficiencies: "What are the inputs necessary to provide service to the entire population?" A consideration of efficiencies of scale would have

focussed more on "What are the inputs necessary to produce a given unit of a service?"[71] (As an aside, the results of Stevens' research points out the possibility of there being solutions to the medical care crisis other than increasing the number of physicians.)

When all is said and done, what really counts is public acceptance of the group practice concept. The number of these groups has grown from 1,550 in 1959 to 4,300 in 1965 and 6,200 in 1969. The number of physicians employed by group practice associations grew from 28,400 in 1965 to 40,700 or one out of every five physicians in 1969.[72] As an example of the growth of an individual plan, the Kaiser Permanente membership started at 30,000 in 1946, by 1955 had grown to 500,000; 1,000,000 in 1962 and 2 million in 1969.

One of the goals in the development of the HMO is to allow consumer groups to have more "influence over the behavior of the medical care system and to increase satisfaction within the system."[73] This has been achieved in the Group Health Cooperative of Seattle which is controlled by an active consumer board that is concerned with matters of consumer satisfaction. A 1970 independent professional survey of customer satisfaction in Kaiser revealed that 80% of the members felt that their "professional contacts were satisfactory or better", 87% planned to renew their membership and 95% believed Kaiser-Permanente was a "good or excellent value".[74]

Critics have charged that members of HMOs make extensive use of outside facilities, either by choice or because HMO provisions are not sufficient for all their needs. Another survey, this time conducted at Kaiser-Portland, disclosed that less than 10% of the total services used

by the population was outside the Kaiser system. And of these, "a significant number were paid for by and known to the medical care system."[75]

In evaluating the relevance of Kaiser's prepaid practice experience to national health policy, Dr. Greenlick concludes:

> "While all the answers are not yet in, in terms of over-all cost-savings and the apparent ability to provide high quality care with patient and physician satisfaction, prepaid group practice seems to offer major advantages. This solution may be only the first step in the long-awaited reorganization of medical care, but it does offer a tested alternative to the present costly ans wasteful fee-for-service system. Even if it is not accepted as the final blueprint for the definitive changes in the present system, its principles can help to formulate a design for urgently needed reform."[76]

The Committee for Economic Development (CED) issued a statement in April, 1973, on policy suggestions for building a national health care system. They found that new approaches in delivery of health care are more positive about emphasizing getting care to the people. The experiments with ambulatory care and neighborhood health centers offer good prospects of getting primary care into those areas where need for service is most acute. Furthermore, these more decentralized units associated with a prepaid group practice could provide a beginning for developing a truly integrated health care system.

An improved system should meet the needs of patients, doctors and society. Patients seek personal, comprehensive and continuous care, and these services should be readily accessible to all people. For doctors, it is important to have an opportunity to practice in close collaboration with their colleagues, and in an environment favorable to experimenting with new techniques. For society, a satisfactory operation of the health market includes incentives to make the maximum use of resources and so

restrain rising costs in the industry; and also assurances of quality by establishing a hierarchy of responsibility; and thirdly, some linkage between financing and delivery systems.

Experience with comprehensive prepaid plans has shown that they can bring the health market closer to meeting the appropriate medical needs of society. By operating side by side with conventional practice, they have introduced a degree of competition into the market which has improved both approaches.

The health maintenance organization (HMO) is a version of group practice prepayment that has been particularly encouraged by the present administration. While the HMO would legally be required to offer certain basic services, the general conclusion is that diverse sponsorship of these plans is important to allow for individual initiative in designing the systems. Particularly in these early experimental stages, innovation is important to achieve the best results from efficiency standards as well as gaining broader public support. Sponsors might include hospitals, or existing medical groups. "Occupational health programs in commerce and industry (where as many as 7 million visits are paid annually) might be converted into general HMOs, as in the case of the Kaiser Foundation Health Plan."[77] Consumer groups, labor unions and academic institutions have all sponsored versions of the HMO.

Any massive effort to reorganize a health system will face considerable managerial, financial and legal barriers. To realize the potentials of the HMO concept for the nation will require planning, effort, accumulation and exchange of data and learning by trial and error. The greatest single

difficulty in starting a new PCP plan is creating a sufficiently large membership to support the necessary integrated facilities. However, as initial efforts and problems are mastered and general knowledge and support accumulates, enrollment will also increase. Another impetus to enrollment will be the growing interest in preventive care.

Another formidable barrier to successful development of HMOs is the extensive state-wide restrictive legislation. These laws restrict the right to organize group practice to provide comprehensive care, limit consumer operation of such organizations restrict the geographical scope of organized medicine and often prohibit attempts to delegate routine physician's tasks to paramedical personnel. The most effective remedy to this legal barrier would be for the federal government to develop model state laws supporting HMO activity.

Important organizational and managerial decisions will have to be made throughout the development of the program. It has become increasingly clear that the key to the success of a health system is its management. The National Advisory Commission on Health Manpower made the following observation in its 1967 report:

> "'the Kaiser Foundation [Health Plan] has achieved real economies, while maintaining a high quality of care, through a delicate interplay of managerial and professional interests. This has resulted from structuring economic arrangements so that both professional and managerial partners have a direct economic stake in the successful and efficient operation of the overall program.'"[78]

The Health Manpower Report supports the opinion of the CED that wider application of commercial principles of management and administration would improve any health care system.

A national health care system will need an effective planning mechanism at the regional level. Such an agency should bring together both the financing and delivery functions of health care.

Some kind of national program for medical manpower planning will be an important development in our overall health policy. Such a program must be designed to attract personnel and skills to alleviate general shortages, geographic maldistribution and to provide primary care. The staffs of new delivery systems will make greater use of allied manpower. Training programs for allied health manpower are being sponsored by so many departments and agencies that there are problems coordinating activities to reach certain goals and objectives. A health manpower training office in the Department of HEW could collaborate with the Department of Labor and other departments and agencies and thus integrate the efforts of the many programs in progress.

There is one last problem area that we should consider and this is the distortion created by the present certification and licensing requirements. The practice or requirement of licensure allows the medical profession to decide who can and cannot enter the field--this amounts to a direct restriction on supply. The essential control is at the level of entry into medical school.

In a very convincing chapter of his book Capitalism and Freedom, Milton Friedman concludes that the custom of requiring licensure "has reduced both the quantity and quality of medical practice; . . . reduced the opportunities available to people who would like to be physicians forcing them to pursue occupations they regard as less attractive; forced

the public to pay more for less satisfactory medical service; retarded technological development both in medicine itself and in the organization of medical practice. I conclude that licensure should be eliminated as a requirement for the practice of medicine."[79]

He argues further that the supply of medical services should be in a free market system with the only restraint being responsibility for harm due to fraud or negligence. Without the existence of professional monopolies, i.e. AMA, he maintains that the medical care market would exhibit much more diversity in plans for delivery. . .

> "My aim is only to show by example that there are many alternatives to the present organization of practice. . . the great argument for the market is its tolerance of diversity, its ability to utilize a wide range of special knowledge and capacity. It. . . permits the customers and not the producers to decide what will serve the customers best."[80]

It has been realistically observed that no single program could simultaneously solve all these problems, but the goals of improving the supply of medical manpower, encouraging more resources in shortage areas and restructuring the system of delivery so as to initiate greater incentives for efficiency on the part of suppliers could be achieved by well-designed federal policies.[81]

As has been noted above, the U.S. Congress has added Title XIII: The Health Maintenance Organization Act, to the Public Health Service Act. It is an attempt to incorporate many of the suggestions and recommendations into a policy leading to a more efficient health service system. It seems fitting to end this study with a review of the new bill.

Federal support for HMOs began in 1971 when the administration

encouraged the establishment of an HMO-type option for Medicare and Medicaid recipients. It was suggested at that time that federal grants, loans, and guarantees be provided for the new HMOs. Then, in the fall of 1972, the Senate passed an HMO-Bill introduced by Senator Kennedy. It called for spending $5 billion in three years on far more sweeping reforms than were originally proposed. A similar piece of legislation received approval in the House on August 1, 1973. This bill called for a much more modest budget: $190 million in grants plus $50 million in loans over four years for HMO development. The HMO Act of 1973 is a compromised version of these two bills and it provides a program of financial assistance including studies of feasibility of developing the HMOs, planning development and expansion of existing HMOs, initial development of HMOs, and initial operation of HMOs. The total appropriation is $325 million over a five year period. This program is one of four major programs of assistance. A second requires employers to offer their employees the option of joining a qualified HMO as part of the employer's existing health program. The third suspends state laws and regulations which would normally prohibit the operation of a federally assisted HMO. The fourth authorizes $50 million for two studies of health care in America. One is to be a federal study and one shall be independent.[82]

As defined by law, an HMO:

·offers a prescribed range of basic health services,

·prepaid, fixed charges are established under a community rating system,

·provision of services may be through the staff of the HMO, an

independent medical group or an individual practice association, optional (supplemental) health services will be provided on a contracted prepaid basis.

"Basic health services" are to include all types of hospital and physician services as well as certain lab and preventive services. Each enrolled member is entitled to an unlimited amount of the basic services. Members can also contract for any or all of the supplemental services offered by the HMO. A supplemental payment is charged for these services.

The law lists "independent medical groups" and "individual practice associations" as legal providers of basic services. A medical group is any organization delivering services by sharing staff, equipment and other facilities. An individual practice association is any legal entity such as a medical foundation "which has entered into an arrangement with individual health professionals to provide services under a compensation arrangement established by the association."[83]

The "community-rating system" as a method of deriving dues, refers to a system of payment according to a per family or per person basis. Equivalent rates are charged to families of the same size and to individuals; that is, fees are not established according to utilization of services.

The Comptroller-General is required to make three studies relating to the provisions of the Act. One of these is an evaluation of at least 50 HMOs receiving federal assistance. The evaluation must be made after the HMOs have been operating for at least three years. The second study requests a report on the economic effects of the requirement that employers provide an HMO option. In third study the GAO must evaluate:

1) "the operations of distinct categories of HMOs in comparison with each other;

2) HMOs as a group in comparison with alternative forms of health care delivery; and

3) the impact of HMOs on the health of the public."[84]

In addition to these studies, the Secretary of HEW must present an annual report on the operation of the assistance program.

The HMO Act, P.L. 93-222, necessitates an annual per capita expenditure of $316.56 for basic benefits, and $430.28 for basic plus supplemental benefits. Expenditures under the Kennedy Bill were estimated at $463.32 and $610.44 respectively. It is interesting to compare these figures to the average per capita health care expenditures in 1971: $311.[85]

In the CED statement, Mr. Wayne E. Thompson remarked,

> "In developing a national health-care system, we must focus on the deliberate creation of a competitive free-enterprise market for health care services. We need a true market in health services that will allow the public to exercise a choice among competing modes in health-care delivery. . . . There should be a major role for private capital and management paralleling the rest of the nation's industrial system.
>
> "Our health-care industry is the only major industry that has not had to submit to the discipline either of the marketplace or public regulations. As a result, the industry has inadequate cost-control mechanisms, and the rate of rise in health-care costs has far outstripped that of any other segment of our economy."[86]

It is my belief that P.L. 93-222, the Health Maintenance Organization Act is a positive step in the direction of creating a competitive health care market. It establishes regulatory guidelines and attempts to enforce cost-control and cost-review mechanisms. I hope it is reasonably successful in attaining its goals.

FOOTNOTES

[1]James Appel, "Health Care Delivery," in The Health of Americans, ed. Boisfeuillet Jones. (New Jersey: Prentice-Hall, Inc., 1970)p. 142.

[2]Howard Bowen and James Jeffers, The Economics of Health Services (New York: General Learning Press, 1971)p. 2.

[3]Ibid, p. 2 & 3.

[4]Ibid, p. 4.

[5]Report of the Committee for Economic Development: Building a National Health Care System, Philip M. Klutznick, chairman(New York: Committee for Economic Development, 1973)p. 11, 30, 31.

[6]Appel, p. 142.

[7]Ibid, p. 143.

[8]Bowen and Jeffers, p. 6,7.

[9]Ibid, p. 2 & 3.

[10]Ibid, p. 7.

[11]Report of the Committee for Economic Development (CED), p. 35.

[12]Bowen and Jeffers, p. 12.

[13]Ibid, p. 8.

[14]Ibid.

[15]See particularly, Milton Friedman in Capitalism and Freedom, cited further: footnote 79.

[16]Bowen and Jeffers, p. 9.

[17]Ibid.

[18]Victor Fuchs, as quoted in Bowen and Jeffers, p. 10.

[19]Ibid.

[20]Ibid, p. 11.

[21]Ibid, p. 11, 12.

[22]Ibid.

[23]CED, p. 31-33.

[24]Bowen and Jeffers, p. 15.

[25]Ibid, p. 17.

[26]Ibid, p. 18.

[27]U. S. Department of Health, Education, and Welfare, Toward a Social Report, cited by Bowen and Jeffers, p. 14.

[28]Bowen and Jeffers, p. 16, see also CED.

[29]CED, p. 16.

[30]Ibid, p. 20.

[31]Bowen and Jeffers, p. 15, see also, Somers, Appel, CED.

[32]Herbert M. Somers, "Health Care Cost," in The Health of Americans, ed. Boisfeuillet Jones(New Jersey: Prentice-Hall, Inc., 1970)p. 168, 169.
-also-
Herbert M. Somers, "Economic Issues in Health Services," in Contemporary Economic Issues, rev. ed., ed. Neil W. Chamberlain (Illinois: Richard D. Irwin, Inc., 1973)p.119-123.

[33]CED, p. 38.

[34]Klarman, et al., paper presented to American Public Health Association, November 11, 1969, cited in both Somers' articles, p. 173 and 120, respectively.

[35]CED, p. 40.

[36]Ibid, p. 20-22.

[37]Ibid, p. 42.

[38]Ibid, p. 17-19.

[39]Charles Schultze, et al., Setting National Priorities: The 1973 Budget(Washington, D.C.: The Brookings Institution, 1972) p. 213.

[40]Ibid, p. 214.

[41]Somers in Health of Americans, p. 160.

[42]Ibid, p. 181.

[43]Bowen and Jeffers, p. 19 & 20.

[44]Somers in Health of Americans, p. 203.

[45]A.J. Culyer, "The Nature of the Commodity 'Health Care' and its Efficient Allocation," Oxford Economic Papers 23 (July 1971): 190.

[46]Martin Feldstein as quoted in Culyer, p. 190.

[47]Culyer, p. 189.

[48]Ibid, p. 192.

[49]Ibid.

[50]Ibid, p. 193, 194.

[51]Ibid, p. 199, 200.

[52]Ibid, p. 208.

[53]Ibid, p. 209.

[54]Bowen and Jeffers, p. 22, 23.

[55]CED, p. 47 and 48: NY State. Governor's Committee on Hospital Costs, "Summary of Findings and Recommendations" (1965).

[56]Scott Fleming, "Anatomy of the Kaiser-Permanente Program,"in The Kaiser-Permanente Medical Care Program, ed. Anne R. Somers (New York: The Commonwealth Fund, 1971) p. 24.

[57]Ibid, p. 24, 25.

[58]Ibid.

[59]Ibid.

[60]Anne R. Somers, ed., The Kaiser-Permanente Medical Care Program (New York: The Commonwealth Fund, 1971) p. 86.

[61]E.W. Saward, "The Relevance of the Kaiser-Permanente Experience to the Health Services of the Eastern United States," Bulletin of the New York Academy of Medicine 9 (September 1970): 707.

[62]Bowen and Jeffers, p. 20.

[63]M.R. Greenlick, " The Impact of Prepaid Group Practice on American Medical Care," The Annals of the American Academy of Political and Social Science (January 1972): 103.

[64]As cited in Greenlick, p. 105.

[65]Saward, p. 713.

[66]Greenlick, p. 111.

[67]T. J. Colombo, et al., "The Integration of an OEO Health Program into a Prepaid Comprehensive Group Practice Plan," American Journal of Public Health, LIX, No.4 (1969): 643.

[68]Ibid, p. 650.

[69]Greenlick, p. 110. Also, E.W. Saward and M.R. Greenlick, "Health Policy and the HMO," Millbank Memorial Fund Quarterly, L, No. 2, Part I (April 1972), 147-176.

[70]Saward and Greenlick, p. 164.

[71]Ibid.

[72]CED, p. 48. also Saward, p. 711, 712.

[73]Greenlick, p. 160.

[74]Somers, p. 60.

[75]Greenlick, p. 165.

[76]Ibid, p. 113.

[77]CED, p. 58.

[78]Ibid, p. 61.

[79]Milton Friedman,Capitalism and Freedom (Chicago: University of Chicago Press, 1965) p. 158.

[80]Ibid, p. 159, 160.

[81]Schultze, p. 251.

[82]U.S., Congress, Senate, Committee on Labor and Public Welfare, Health Maintenance Organization Act of 1973: Explanation of Act and Text of Public Law 93-222, 93d Cong., 2nd sess., February 1974, p. 1.

[83]House Republican Conference Legislative Digest, Vol.II, #25, PartII (September 11, 1973), H.R. 7974, Health Maintenance Organizations, p. 8.

[84]U.S. Congress, p. 12, 13.

[85]Legislative Digest, p. 10.

[86]CED, p. 90.

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